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(54) Sealing structure for inflation nozzle for inflation pump

(57) An inflation nozzle (20) for an inflation pump includes a housing (21), a plug seat (10), a plug (31; 32; 33), and a cap (22). The inflation nozzle (20) can be engaged with a valve (A; A'; B; C) of a tire to be inflated. The plug seat (10) includes a head (13) and a gas tube (12). A groove (101) is formed on an outer periphery of the gas tube (12). A seal ring (30) is received in the groove (101) and slightly protrudes out of the groove (101). The plug (31; 32; 33) is mounted in the head (13) and is in scaling contact with the valve (A; A'; B; C) during inflation. The inner periphery (214) of the housing (21) abuts against the seal ring (30) received in the groove (101) to provide sealing therebetween.

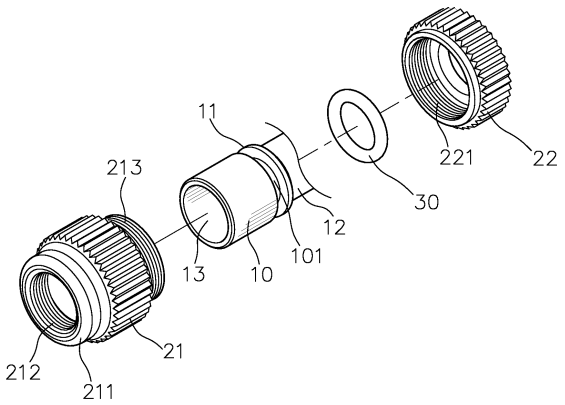

Fig. 2

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EUROPEAN SEARCH REPORT

Application Number
EP 10 17 4483

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	US 2004/055641 A1 (OSTROWIECKI, MORRIS [JP]) 25 March 2004 (2004-03-25) * figures 25A,37 * * paragraph [0136] - paragraph [0144] * * paragraph [0156] - paragraph [0163] * -----	1,2,4-9	INV. F04B33/00 F04B53/10 B60C29/00 B60C29/04 B60C29/06
Y	DE 10 2007 023566 A1 (HUANG, YING-CHE [TW]) 18 December 2008 (2008-12-18) * paragraph [0004] * * paragraph [0021] - paragraph [0026] * * figures 7,1,2,5 * -----	1,2,4-9	F16K11/02 F16K11/065 F16K11/14 F16K15/00 F16K15/20 B60S5/04
A	US 2004/250852 A1 (SHIPMAN, KERRY A. [US]) 16 December 2004 (2004-12-16) * paragraph [0025] - paragraph [0030] * * figures 5-7 * -----	1-9	
A	US 6 105 600 A (WANG, LOPIN [TW]) 22 August 2000 (2000-08-22) * column 2, line 38 - column 5, line 30 * * figures 1-4 * -----	1-9	TECHNICAL FIELDS SEARCHED (IPC)
A	US 6 276 391 B1 (WU, SCOTT [TW]) 21 August 2001 (2001-08-21) * column 2, line 55 - column 3, line 29 * * figures 3,4 * -----	1,2,7,8	F04B B60C F16K B60S

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	19 October 2011	Gnüchtel, Frank

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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19-10-2011

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2004055641 A1	25-03-2004	AU 2003264943 A1	19-04-2004
		WO 2004029455 A1	08-04-2004
DE 102007023566 A1	18-12-2008	NONE	
US 2004250852 A1	16-12-2004	NONE	
US 6105600 A	22-08-2000	NONE	
US 6276391 B1	21-08-2001	NONE	

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82